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## EXHIBIT D

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,929	07/26/2001	Chris A. Barton	NA11P014/01,128.01	8771
28875	7590	03/22/2005		
Zilka-Kotab, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120				
EXAMINER				
SCHUBERT, KEVIN R				
ART UNIT		PAPER NUMBER		
2137				

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/916,929

Applicant(s)

BARTON, CHRIS A

Examiner

Kevin Schubert

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.  
 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13, 17-29 and 33-44 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-13, 17-29 and 33-44 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 26 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 02152005  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_

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#### DETAILED ACTION

Claims 1-13,17-29, and 33-44 have been considered.

#### Information Disclosure Statement

5           The information disclosure statement filed 2/15/05 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the references are not listed on a 1449 Form. The references have been submitted on an 892 Form. For the examiner to consider an IDS, cited patents need to be listed on a 1449 Form.

10           It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

15

#### Claim Rejections - 35 USC § 102

20           (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

25

Claims 1-2,4-7,9-13,17-18,20-23,25-29,33-35,38-40,42, and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Grupe, U.S. Patent Application Publication No. 2002/0194212.

30           As per claims 1,17, and 33, the applicant describes a method of scanning data comprising the following limitations which are met by Grupe:

- a) executing scanning control logic utilizing a central processing unit ([0008],[0009]);
- b) identifying a request related to data at the central processing unit ([0008],[0009]);

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c) indicating the data to a scanning co-processor coupled to the central processing unit so that the data is scanned by the scanning co-processor under control of the scanning control logic ([0008],[0009]);

d) waiting for results from the scanning co-processor ([0008],[0009]);

5 e) executing additional logic utilizing the central processing unit while waiting for the results from the scanning co-processor ([0008],[0009]);

f) initiating an event based on the results from the scanning co-processor ([0015],[0017]);

g) wherein the scanning co-processor is under the control of the central processing unit via the execution of the scanning control logic by the central processing unit ([0008],[0009]);

10 h) wherein it is determined whether the data meets a predetermined criteria, where the criteria is based on a type of a file associated with the data ([0012],[0036]);

i) wherein the data is sent to the scanning co-processor if it is determined that the data meets the predetermined criteria ([0012],[0036]);

j) wherein additional data to be scanned by the scanning co-processor is queued while waiting  
15 for the results from the scanning co-processor ([0009]);

The applicant should note that the central processing unit refers to the CPU of the source computer and the scanning co-processor is the scanning computer which the source computer sends selected information to for scanning. The scanned data is returned in a log file. The data in the log file is processed and a security event, such as deleting a virus [0017] is performed if the scanning  
20 computer determines that a virus is present. Also, the scanning control logic is maintained in the scanning co-processor computer(s). The scanning control logic tells the scanning co-processors to search for banned words or phrases, for example [0011]. The scanning control logic, which controls the operation of the scanning co-processor, is executed by the CPU even though the CPU is on the source computer because the CPU sends the data to the scanning control logic which implements the  
25 automatic execution of the scan on the scanning computer.

Regarding parts h) and i), the predetermined criteria can be a type of file. As disclosed by Grupe, only executable files can be scanned in one embodiment. Thus, this would increase the speed of the scan because only executable files would be transferred to the scan computer. Also, in another

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embodiment, only emails are scanned in order to confirm, for example, that there is no pornographic material present [0036]. In this situation only emails would be sent to the scanning computer.

Regarding part j), data is sent to the scanning computer, or scanning co-processor, in bulk [0009]. It is inherent that the data is not all processed at the same exact time but is rather processed in a queue on the scanning computer where additional data to be scanned is processed after the results of the first data are processed.

The applicant should note that Grupe not only meets all the limitations of the claim but also meets the applicant's overall goal of reducing load on the computer and allowing it to perform other functions while a scan is taking place because the scan is outsourced to another computer.

As per claims 2 and 18, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Further comprising processing the data utilizing the central processing unit upon the receipt of favorable results from the scanning co-processor including a situation where malicious code is not detected ([0015]);

The data received by the CPU is in the form of a log file which is processed whether or not the results are favorable, or there are no viruses present, or unfavorable, or there is a virus present. If there is a virus present, a security event is initiated [0017].

As per claims 4,7,20, and 23, the applicant describes the method of claims 1,6,17, and 22, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning control logic includes hardware ([0011]);

The scanning control logic must include memory, which is hardware, to store specific words or phrases which it looks for in the scan.

As per claims 5 and 21, the applicant describes the method of claims 3 and 20, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning control logic is stored on the scanning co-processor [0009];

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As the examiner discussed earlier, the scanning control logic resides with the scanning computer, or scanning co-processor, and gives the scanning computer instructions (such as specific banned words or phrases to look for) during the scan.

5 As per claims 6 and 22, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning control logic includes software [0011];

The scanning control logic includes instructions stored in the memory for performing the scan and looking for such things as specific banned words and phrases.

10

As per claims 9 and 25, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning co-processor performs content scanning [0011];

15

As per claims 10 and 26, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning co-processor performs virus scanning [0011];

20 As per claims 11 and 27, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning co-processor includes memory [0016];

Since the scanning co-processor is a computer, it includes memory.

25 As per claims 12 and 28, the applicant describes the method of claims 11 and 27, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein virus signatures are stored in memory [0011];

It is inherent that the virus signatures are stored in order for the scanning co-processor to detect that a virus is present.

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As per claims 13 and 29, the applicant describes the method of claims 11 and 27, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein rule sets are stored in memory [0011];

The rule sets are the specific banned words or phrases.

5

As per claims 34 and 35, the claims repeat the limitations of claim 1, which is met by Grupe (see above), with the following additional limitations which are also met by Grupe:

j) initiating a security event upon the receipt of unfavorable results from the scanning co-processor including a situation where malicious code is detected ([0015],[0017]);

10 k) processing the data utilizing the central processing unit upon the receipt of favorable results from the scanning co-processor including a situation where malicious code is not detected ([0015]);

Data is processed as a log file received from the scanning computer. The data is processed whether or not the log file says that the scanned data has viruses or doesn't have viruses. If the data is processed and a virus is present, a security event such as deleting or disinfecting the virus is initiated  
15 [0017].

As per claim 38, the applicant discloses the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the criteria is further based on a user ([0036]);

20

As per claim 39, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the criteria is further based on software logic run by a bios ([0036]);

The criteria is based on logic which tells the computer how to segregate the data. For  
25 example, if the criteria is "email", the software logic finds all the email files and sends them to the scanning computer for scanning.

As per claim 40, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

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Wherein the scanning control logic is executed automatically [0009];

As described throughout the primary reference, scanning is done on the scanning computer once it receives data from the source computer. The source computer sends data to the scanning computer, the data is scanned, and the log file is sent back all in an automated process.

5

As per claim 42, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning control logic is executed manually by a user [0028];

The primary reference discloses that in some situations the data is not sent automatically but through "on demand scans" [0028]. "On demand scans" implies that a user is requesting a scan to take place. In this situation, the data is sent to the scanning control logic for scanning.

10

As per claim 44, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the central processing unit aids the scanning co-processor when a large amount of data is to be scanned [0016];

15

As disclosed, the CPU on the source computer can aid the scanning co-processor, or scanning computer, by dividing the data to be scanned into fractions and sending the fractions to a plurality of scanning computers.

20

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

25

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

30

Claims 3,8,19,24,36,41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grupe in view of Zuta, International Publication No. WO 98/45778.



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As per claims 3 and 19, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is met by Zuta:

Wherein the central processing unit is coupled to the scanning co-processor via a bus (Zuta:  
5 Fig 2);

Grupe discloses all the limitations of independent claims 1 and 17. However, Grupe does not disclose that the CPU is coupled to the scanning co-processor via a bus.

Zuta discloses a similar anti-virus scanning system in which a supervisor computer (2 of Fig 2) monitors the data processed by the CPU of a first computer (11 of Fig 2) and intervenes to stop the  
10 CPU of the first computer if the supervisor computer thinks a virus might be present. Zuta also discloses that the CPU of the first computer and the scanning co-processor of the supervisor computer are coupled by a bus (17 of Fig 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was filed to incorporate the ideas of Zuta with those of Grupe and add the use of a bus between the CPU of the  
15 first computer and the scanning co-processor of the second computer because a bus is a commonly used method of transmitting data between two units.

As per claims 8 and 24, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is met by Zuta:

20 Wherein the event is initiated under the control of the scanning control logic (Zuta: Page 19, 2<sup>nd</sup> paragraph).

As per claim 36, the applicant describes the method of claim 35, which is met by Grupe (see above), with the following limitation which is met by Zuta:

25 Wherein the scanning information is updated via a network periodically (Zuta: Page 12, 2<sup>nd</sup> paragraph);

As per claim 41, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is met by Zuta:

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Wherein the scanning control logic is executed automatically when a computer is booted up (Page 24, lines 1-3).

As per claim 43, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is met by Zuta:

Wherein the scanning control logic is executed using software logic run by a bios (Page 24, lines 1-3);

The scanning control logic is implemented on boot-up. This means the scanning control logic is implemented using logic run by a bios.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grupe in view of Snavelly, (Snavelly, Allan; Tullsen, Dean. Symbiotic Jobscheduling for a Simultaneous Multithreading Processor. Published in the Proceedings of ASPLOS IX. November 2000).

As per claim 37, the applicant describes the system of claim 35, which is met by Grupe (see above), with the following limitation which is met by Snavelly:

Wherein the additional logic to be executed and the additional data queued to be scanned are handled utilizing multi-threading algorithms (Snavelly: Abstract);

Grupe discloses all the limitations of independent claim 35. However, Grupe fails to mention the use of multi-threading algorithms.

Snavelly discloses that multi-threading algorithms are an effective way to "increase system utilization and speedup the execution of jobs" (Snavelly: Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was filed to incorporate the ideas of Snavelly with those of Grupe and use multi-threading algorithms because multi-threading algorithms are an effective way to deal with multi-job processing such as with additional logic to be executed or additional data queued to be scanned.

### *Response to Arguments*

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Applicant's arguments, see Remarks, filed 1/28/05, with respect to the rejection(s) of claim(s) 14-16 under Makita and Makita in view of Zuta have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Grupe, U.S. Patent Application Publication No.

5 2002/0194212.

Applicant's arguments with respect to the rejection(s) of claim(s) 37 under Makita in view of Zuta in further view of Slotznick have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Snavelly (Snavelly, Allan; Tullsen, Dean. Symbiotic Jobscheduling for a Simultaneous Multithreading Processor. Published in the Proceedings of ASPLOS IX. November 2000).

#### Conclusion

15 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

25 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Schubert whose telephone number is (571) 272-4239. The examiner can normally be reached on M-F 8:00-5:00.

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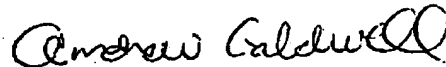
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent


- 5 Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ANDREW CALDWELL  
SUPERVISORY PATENT EXAMINER



<b>Form 1449 (Modified)</b>  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	<table style="width: 100%;"> <tr> <td style="width: 50%;">           Atty. Docket No. NAIIP014 Applicant: Barton et al. Filing Date: July 26, 2001         </td> <td style="width: 50%;">           Application No.: 09/916,929  Group Art Unit: 2137         </td> </tr> </table>	Atty. Docket No. NAIIP014 Applicant: Barton et al. Filing Date: July 26, 2001	Application No.: 09/916,929  Group Art Unit: 2137
Atty. Docket No. NAIIP014 Applicant: Barton et al. Filing Date: July 26, 2001	Application No.: 09/916,929  Group Art Unit: 2137		

**U.S. Patent Documents**

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	A						
	B						
	C						
	D						
	E						
	F						
	G						
	H						
	I						
	J						
	K						

**Foreign Patent or Published Foreign Patent Application**

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
	L						Yes	No
	M							
	N							
	O							
	P							

**Other Documents**

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
KS	R	Copy of Office Action Summary from application no. 09/916,600 which was mailed on 01/13/2005.
	S	
	T	
Examiner <i>Kevin Schubert</i>		Date Considered <i>3/11/05</i>

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>Notice of References Cited</b>	Application/Control No. 09/916,929	Applicant(s)/Patent Under Reexamination BARTON, CHRIS A	
	Examiner Kevin Schubert	Art Unit 2137	Page 1 of 1

## U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
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	J	US-			
	K	US-			
	L	US-			
	M	US-			

## FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

## NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Snively, Allan; Tullsen, Dean M. Symbiotic Jobscheduling for a Simultaneous Multithreading Processor. Published in the Proceedings of ASPLOS IX. November 2000.
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
 Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office  
 PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 20050312